



Zmanda Cloud Backup Frequently Asked Questions

Release 4.1

Zmanda, Inc

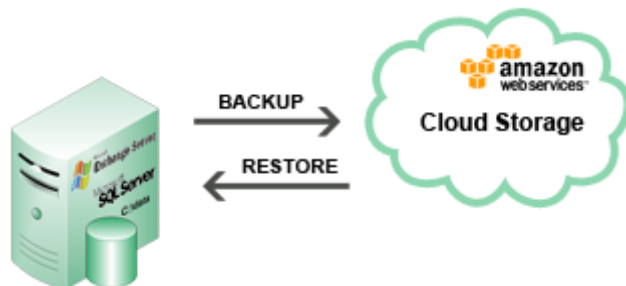


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Terminology

What is ZCB?

ZCB is the complete backup solution for Windows servers. It backs up file systems and live applications such as Microsoft Exchange and SQL Server to a highly dependable storage cloud – Amazon S3.

What is a backup set?

All activities in ZCB are applied to backup sets. A backup set defines the parameters (the what, where, and when) for backing up a group of directories or an application such as Exchange. Each backup set can only be of a single type. For example, you cannot back up an Exchange server and Windows System state in the same backup set. Instead, you must make a backup set for each.

What is the *amandabackup* user?

All ZCB services run as *amandabackup* user. During installation, the *amandabackup* user is added to “Backup Operators”, “Administrators” and “Users” user groups. This user is essential for ZCB functionality. The behavior for the creation of the *amandabackup* user is as follows.

Windows domain NOT configured on ZCB machine

- The *amandabackup* user is created if it doesn't pre-exist on the machine
- The supplied password needs to be correct if *amandabackup* user pre-exists on the machine

Windows domain configured on ZCB machine

If *amandabackup* user pre-exists on the domain, it is reused. The supplied password needs to be correct.

If *amandabackup* user doesn't pre-exist on the domain, then

- The *amandabackup* user is created locally if ZCB machine is NOT the domain controller
- The *amandabackup* user is added to the domain if ZCB machine is the domain controller

The *amandabackup* local user may be deleted at the time of uninstallation depending on whether or not you choose to preserve data during uninstallation.

What do you mean by “full”, “differential” and “incremental” backup levels?

ZCB supports full, differential and incremental backups.

Full backup: This level of backup makes ZCB back up all the data associated with the backup set. This is also called backup level 0.

Differential backup: This level of backup makes ZCB back up only the data which has changed since the last successful full backup. This is also called backup level 1.

Incremental backup: This level of backup makes ZCB back up only the data which has changed since the last successful full or last incremental backup. This is also called backup level 2 or more.

For more information, please see [When should I use differential or incremental backup levels?](#)

ZCB Features

What are the different ways in which ZCB can perform backups?

ZCB supports following ways to perform backups:

“Backup to Cloud”

This operation means that ZCB will start uploading data as it begins getting backed up. No local copies of backup data will be available. Since the data is only available on the cloud, the retention policy configured under the “Cloud Storage” heading of “Backup Where” section will be applicable.

Please note you need “administrator” privileges to run this operation. If you are using Windows 7 and later versions, you can use “Run as administrator” option provided by Windows.

“Backup to Disk”

This means that ZCB will backup data to local disk. Please note that under this operation, ZCB will not upload backed up data automatically. It is expected that user will launch an upload operation separately at a later time, according to user’s preference. If the user doesn’t upload backup data, only the retention policy configured under the “Local Storage” heading of “Backup Where” section will be applicable.

“Backup to both Disk and Cloud”

This means that ZCB will make two copies of backup data – one each on disk and the cloud. To make backup operations fast, this operation is a two stage process. First, the data is backed up to local disk. Once this is complete, a copy of data is uploaded to the cloud.

Since the data is available both on disk and the cloud, the retention policies under both “Local Storage” and “Cloud Storage” headings on “Backup Where” section will be applicable.

Can I do backup and upload at the same time?

Yes, you can choose the “Backup to Cloud” operation which starts uploading data as it is getting backed up. However, please note that no local copies of data will be available in this case.

Can I install ZCB on multiple machines and use my Zmanda, Inc license on them?

Yes, a single ZCB license can be shared across an unlimited number of systems. Please note that all such systems can potentially access the data backed up by other systems (via **Tools>Restore Catalog** menu option). This may be a data privacy concern and hence you perhaps would want to turn on encryption on all ZCB systems.

What file extensions you support?

ZCB supports backup and restore of all types of files.

Is ZCB HIPAA compliant?

ZCB supports various requirements to comply with HIPAA regulations when it is properly configured and is implemented as part of a fully HIPAA compliant solution. When applied to cloud backup, HIPAA regulations largely apply in two areas - data privacy and data security.

Data privacy: The backup data is transmitted to Amazon datacenters over 128 bit SSL channel. The backup data can be encrypted on the ZCB machine, before it leaves the customer site. Encryption is performed using standard RSA RC4 algorithm and the encryption keys are owned and managed completely by users and hence once data is encrypted, it can't be decrypted by either Zmanda, Inc or Amazon Web Services.

Data security: ZCB provides support for backup to multiple Amazon S3 geographic locations to mitigate the risk of failure. ZCB backup data is never transmitted to Zmanda, Inc servers and is stored only on datacenters managed by Amazon Web Services. Since customer authentication details are known to Zmanda, Inc, the data stored on Amazon servers can be accessed by Zmanda, Inc technical support engineers to resolve the customer issues. This access, however, is only upon customer request and is stringently monitored by Zmanda, Inc management. The backups are stored in Amazon S3 in special buckets that can be accessed only by ZCB product.

Once ZCB transfers data to Amazon data centers, Amazon safeguards and manages the data as per their published security policy document. Please refer to the Amazon Web Services: Overview of Security Processes document for more details on data privacy and data security measures.

For more information about HIPAA compliance, please see <http://www.hhs.gov/ocr/privacy/hipaa...eguidance.html>

Using ZCB

What platforms/applications are supported?

Platforms: Windows 2003 server, Windows 2008 server R2, Windows 7, Windows Vista and Windows XP.

Applications: ZCB supports NTFS file system, System state (active directory, registry, certificate server), MySQL 5.x, SQL server 2000, 2005 and 2008, Microsoft Exchange 2003, 2007 and 2010, Share Point 2010 and 2007 and Oracle 11g running on any of the listed platforms.

Can I run ZCB as a user not belonging to Administrator group?

No. Only a Windows user belonging to Administrator's group can install and perform ZCB operations using the UI.

On Windows XP and Windows 2003 server, if a user that does not belong to Administrator's group launches ZCB UI, the error message **Write permission denied** is displayed. User can right click on ZCB UI short cut and select **Run As** option. Specify the Administrator user password to launch ZCB UI.

On Windows Vista, Windows 7 and Windows 2008 server, if a user that does not belong to Administrator's group launches the UI using ZCB short-cut, the **User Access Control** dialog will appear. Enter Administrator user account name and password. ZCB UI will be launched.

How do I enable VSS (Volume Shadow Services)?

The Volume Shadow Copy Service must be enabled for ZCB backups. Although the Volume Shadow Service is enabled by default, it may have been turned off after Windows installation. To ensure that it is running:

Right-click the **My Computer** icon and choose **Manage** from the popup menu.

Expand the Services and Applications tree and locate the Volume Shadow Copy Service.

If it is not started, do so.

If necessary, change the General Properties to make the Startup Type **Automatic** rather than **Manual**.

How can I manage my backup sets?

Backup sets are listed along the left edge of the ZCB display. You can delete, [deactivate or validate](#) a backup set by right-clicking on it and choosing from the pop-up menu.

Backup set names are limited to 32 alphanumeric characters. A backup set must be activated (which is the default state) for the backups it defines to actually be performed as scheduled.

What happens when I “deactivate” or “validate” a backup set?

Deactivating a backup set: Doing this on a backup set would mean that no operations such as backup or restore can be performed on that backup set. All scheduled tasks for this backup set are disabled too.

Validating a backup set: This is a simple way to check whether the essential configuration for the backup set is correct or not. If there are errors during validate, it indicates that the ZCB won't be able to use the configuration provided by the user to perform backup/restore operations correctly.

When should I use differential or incremental backup levels?

Choosing differential and incremental backup reduces the amount of data to be backed up and uploaded to Amazon S3. Incremental backups can be smaller in size compared to differential backups. But, differential backups allow for faster restoration compared to incremental backups.

It is not possible to do mix incremental and differential backup for a backup set. If you configure a backup set to do differential backups, you cannot use incremental backups for the backup set.

What do I configure in “Local Storage” section on the Backup page?

If you want to keep backup data just on the cloud, you don't need to configure the **Local Storage** section. This will be the case when you use **Backup to cloud** operation in ZCB 4.0 and beyond.

However, if you wish to put backup data to a local disk (**Backup to Disk** or **Backup to both Disk and Cloud** operations) then you would need to configure the fields in the **Local Storage** section.

Can I backup data from a mapped network drive?

Yes. ZCB supports backing up mapped drives provided the shares are accessible by **amandabackup** user. ZCB supports both Windows and SMB shares mapped as drives. Backup of NTFS encrypted files on mapped network drive will fail with **Access Denied** error.

Requirements:

The **amandabackup** user must be a valid user on the machine whose network share is being accessed by ZCB machine. The password must be the same.

If the ZCB machine and the machine where the Network share is present, are part of a Windows domain, then make sure that the **ZWCService** is started with the domain **amandabackup** account i.e. **domainname\amandabackup**.

On the ZCB machine, map the network share so that the user who launches the ZCB user interface is able to view the mapped drive in the Windows explorer.

Can I use a mapped network drive as the Local Storage on the backup page?

Yes. You can use a mapped network drive to store backup images. To configure mapped network drive as the backup folder, perform the following steps:

Ensure that **amandabackup** user has read and write access to the network share.

Map the network share as a mapped drive using the backup user (**Administrator** user).

In ZCB **Backup** page, under the Local Storage section, use the browse button next to Location box to select the mapped drive.

You will have to modify the ZCB scheduler entries in the Windows Task Scheduler to run as **amandabackup** local or domain user.

How do I backup NAS shares?

Map the NAS share as a network drive. See the answer to the question [Can I backup data from a mapped network drive?](#)

Can I backup Linux clients?

Yes using Samba. ZCB can backup data from mapped Samba shares from the Linux machine without using VSS (locked and open files are not backed up). There is no Linux ZCB client. [Amanda Enterprise edition](#) provides this functionality. Please contact Zmanda, Inc for more details.

Does ZCB support FAT32 filesystem or Netware shares?

ZCB can backup only NTFS filesystem. FAT32 filesystem can be used for Backup Folder if backup encryption is not required.

How do I configure ZCB to back up SQL Server 2000, MS Exchange and Oracle servers?

The steps are:

- Install and run ZCB on the server you intend to back up.
- Go to Backup page.
- In the “Backup What” section, choose the desired **Backup Type**.
- ZCB will discover all the instances of the chosen server and automatically add them to the backup set.

How long are the backups retained in the local backup folder and on S3 storage?

Local and S3 backups are retained as specified by the retention policies entered in the **Backup Where** section on the Backup page. You can choose to retain backups for months, days, years or forever, based on space availability and recovery requirements.

Do I need to restore a full backup and then restore the incremental/differential backup(s) to restore to a point in time?

No. ZCB lets you select any point in time (based on when the last backup was performed, and then automatically determines which backups must be restored.

How do I restore to a different directory?

The **Restore Page** includes an option to restore to a different directory.

Can I control the bandwidth being used by ZCB for upload/download?

Yes. By default, ZCB always attempts to use the maximum bandwidth you have available.

However, if you wish to specify the limits for bandwidth to be used by ZCB, you can specify these two values:

Max Upload Rate: This value, in kilobits per second, refers to the maximum bandwidth ZCB will use for uploading backup data to the cloud.

Max Download Rate: This value, in kilobits per second, refers to the maximum bandwidth ZCB will use for download backup data from the cloud.

ZCB allows you to set these two values both at a global level and at a backup set level. For configuring these values globally, across all the backup sets, please go to **Preferences > Bandwidth**. For configuring these limits at a backup set level, so that they override the global values, please go to **Cloud Storage** sub-section on the **Backup Where** section.

My backups take a long time to complete. What can I do to speed it up?

The upload speed depends on bandwidth availability. However, if you believe that ZCB is not using the available bandwidth completely, please do the following:

- Make sure that bandwidth throttling limits are not configured. Please see the FAQ [Can I control the bandwidth being used by ZCB for upload/download?](#)
- Tweak the values in **Preferences > Maximum thread Counts**. If you increase the number of threads, the upload/download generally speeds up due to concurrent data transfers. However, beyond a point the performance might not improve further, or it might even fall due to other overheads.
- Adjust the schedules so that uploads occur when maximum bandwidth is available. You can upload multiple backup sets at the same time.

I cannot use the machine when backups are running. What can I do?

ZCB uses the Windows Volume Shadow Services (VSS) to perform backups. VSS minimizes impact on the application. But because system resources such as CPU cycles and memory are shared, the impact cannot be entirely eliminated. Compression in particular can consume significant system resources.

Why can't I change the cloud location for a backup set?

The cloud storage locations are all totally different from each other. If backup data is spread across multiple cloud locations, it will be difficult for ZCB to perform restores. Hence, once you choose a cloud storage location and save a backup set, you can't change it.

If you wish to use a different cloud storage location, please create a different backup set.

How can I delete old backup data from cloud?

You can configure ZCB to automatically delete old backup data by configuring suitable retention policies. Please refer to the [How long are the backups retained in the local backup folder and on S3 storage?](#)

However, if you wish to manually delete data which has not expired as per the retention policy, then you can do so. Please go to **File > Purge All Backup Runs Before** and choose a calendar date. This will delete all the backup data from the cloud storage before this calendar date. Please note that the backup data on local disk will not be deleted.

Why do I see so many User Access Control pop-up messages while using ZCB?

When ZCB is run using a non-Administrator user, one will see UAC messages on Win Vista, Win 7 & Win 2008. ZCB requires elevated privileges to create, delete & query schedules. So, when ZCB tries to create, delete or query the Windows scheduler, it throws a UAC pop-up so as to make sure that the actions are run under elevated privileges.

Advanced Operations

Can I copy the backup folder to another machine?

Not directly. To move a backup folder to a different machine, first upload from the source machine to S3, then restore the backup catalog to the target machine as described in [How do I restore to different machine?](#).

Can I move existing local backups to a different disk location?

Yes. If you have been using ZCB to keep backup data on your local disk and now wish to move this old data to a new location on your machine (a different drive for instance), you can do so. For this, you will have to use the **movebackup** option of **zwcontroller.exe** program which ships with ZCB.

Please refer to the movebackup operation documentation in the **Administration** section of the ZCB user guide.

How do I restore to different machine?

The backup must reside in S3 storage. Backups stored in the local backup folder cannot be restored to another machine using this process. If you need to restore in a scenario with you have no backups on the cloud storage,, please open a support case.

Install and run ZCB on the restore target machine.

If the backup is encrypted, make sure the required encryption certificates from the backup machine(s) are available on the restore target machine. If the backup archives have been created using ZCB prior to 3.0 release, the **Zmanda, Inc** key container is also required on the restore target machine.

From the **Tools** menu, choose **Restore Catalog** to restore the backup. You must supply a host (host name of the original server) and backup set name to identify the backup used for the restore. If backup set name is not specified, all backup sets found in the original server, will be recovered on the new server.

All the recovered backup sets will be named “<backup set name> (<original hostname>)”

Use ZCB to restore the files as if they were on the original machine. You can also look at the reporting information for the recovered backup sets. Please refer to the **Restore** section in the ZCB user guide for more information.

Does ZCB log events to Windows Event Viewer?

Yes. All Backup, Upload, Download and Restore successful and failure events are logged. In addition, if email notifications have been configured on ZCB, any failure while sending emails will also be logged in the Windows Event Viewer. Following output shows an example of Backup failure.

```
Event Type:      Error
Event Source:    ZCB
Event Category: Backup-Restore
Event ID:        501
```

Date: 7/7/2009
Time: 5:40:33 PM
User: N/A
Computer: EXCH-SERVER-1
Description:
BackupSet3 - Backup failed with errors.
Error Details : File system not supported.

Please check log files for details.

Why is the Backup Size on the Backup Page different from the Total Upload Size reported on the the ZCB Monitor Page?

The **Backup Size** on the Backup page shows the size of Backup archive. The **Total Upload Size** on the Monitor page includes the backup meta data and catalog for the archive in addition to the backup archive. So the **Total Upload Size** will be greater or equal to the **Backup Size** value. The backup archive metadata and catalog is required to recover the catalog in case of disaster recovery of ZCB machine.

Amazon S3 Cloud

How can I verify the validity of the S3 Certificate and Connection?

Choose Cloud->**Check Cloud Connection**. This causes ZCB to connect to S3 and validate the required S3 subscription and keys. You can use this test to validate your installation, or to troubleshoot failed uploads/downloads.

I'm getting Amazon subscription failure errors trying to access the Zmanda Network Downloads page. Why?

To access Zmanda Network downloads page, please [click here](#).

Do not access ZCB product using <http://www.amazon.com/dp-applications> or <https://aws-portal.amazon.com/gp/aws/user/activation/index.html> or <http://network.zmanda.com/questionnaire.php>. Please note that this process ends up regenerating your Amazon S3 certificate which renders your old/current S3 certificate useless and ZCB will fail to upload data to S3 and restore data from S3. You will have to download new S3 certificate and import it in ZCB using ZCB user interface.

How secure is my data with ZCB and Amazon S3?

There are several levels of security provided by ZCB and Amazon S3 that ensure privacy and security of your data:

- ZCB provides an option to encrypt your backup data by using Digital Certificates from Trusted Certificate Authorities or using self-signed certificates you can generate yourself.
- In addition to encrypting the backup data, ZCB provides an option to transfer your data from your computer to Amazon S3 via secure 128-bit SSL.

- Amazon S3 provides access controls that only permit authenticated access by ZCB with your own unique security certificate. You, and only you, maintain full control over who has access to your backup data. See [this white paper from Amazon \(requires Adobe Acrobat reader\)](#) for details.

How to purchase Amazon S3 subscriptions?

If you bought ZCB from website and downloaded both ZCB installer and s3 certificate, then you don't need to do anything. You can simply import the certificate to ZCB using **Cloud > Import Cloud Certificate** menu.

However, if you have installed ZCB but don't have s3 certificate which is required to use ZCB with Amazon S3 cloud, then you purchase a subscription. Please click on Cloud > **Purchase Cloud Subscription** to buy Amazon S3 subscriptions for ZCB. The purchase process requires Zmanda Network login information. Please join Zmanda Network for free at <http://network.zmanda.com/>

After your purchase, Amazon S3 certificate will be available for download from Zmanda Network. Please download the certificate to the ZCB Windows server and import the certificate into ZCB configuration.

How much are we spending? How much have we spent in the past?

Please click on **Cloud > Cloud Billing** to view monthly billing activity and see what is being spent so far this month. You will need your Amazon account information to access the bill.

How do I use a different Amazon S3 account?

An additional S3 account requires an additional subscription, available from the [Zmanda Network](#).

Who sends the monthly bill?

Monthly bill for ZCB license, storage and transfer cost will be provided by Amazon. It will appear in financial statements (credit card statements) under heading **AMZN PMTS(Services and Merchandise)**. Zmanda, Inc does not bill the customer directly. The bill will have specific entries for ZCB in addition to entries for other Amazon Web Services if you are using them.

Support

I am facing a technical issue. How do I get support?

You can contact our support by clicking on **Help > Contact Support**. This will open your browser and direct it to Zmanda Support. After logging in using your Zmanda Network account, you can open a support case.